

IN THE CLAIMS:

1. (Cancel)

2. (Currently Amended) A system as recited in claim [[1]]

wherein said high altitude communication device comprises a stratospheric platform.

3. (Currently Amended) A system as recited in claim [[1]]

wherein said high altitude communication device is selected from the group consisting of a LEO satellite, a MEO satellite, or a GEO satellite.

4. (Currently Amended) A system as recited in claim [[1]]

wherein said user terminal is mobile.

5. (Currently Amended) A system as recited in claim [[1]]

wherein said multiple dynamic links are capable of having independently varying data rates.

6. (Currently Amended) A system as recited in claim [[1]]

wherein said user terminal comprises a router for routing uplink communication portions through said links.

7. (Currently Amended) A system as recited in claim [[1]]

wherein said router receives the communication portions and arranges the communication portions in a predetermined sequence.

8. (Currently Amended) A system as recited in claim [[1]]

wherein said user terminal comprises a multiple beam antenna capable of simultaneously generating the multiple dynamic links.

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9. (Currently Amended) A ~~system as recited in claim 1,~~
~~wherein said user terminal establishes~~ communication system comprising:

a plurality of high altitude communication devices;

a user terminal establishing a plurality of multiple dynamic
links corresponding respectively to said plurality of high altitude
communication devices, said user terminal generating multiple
communication portions of a communication and transmitting the multiple
communication portions through said multiple dynamic links, wherein said
multiple dynamic links comprise a plurality of forward links and a plurality
of return links, wherein said plurality of forward user links is greater than
said plurality of return links; and

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a gateway terminal receiving the communication portions
from the high altitude communication ^{devices} ~~device~~ and reassembling the
communication portions into the communication.

10. (Currently Amended) A ~~system as recited in claim 1,~~
communication system comprising:

a plurality of high altitude communication devices;

a user terminal establishing a plurality of multiple dynamic
links corresponding respectively to said plurality of high altitude
communication ^{devices} ~~devices~~, said user terminal generating multiple
communication portions of a communication and transmitting the multiple

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communication portions through said multiple dynamic links, wherein said user terminal comprises a hub and router circuit coupled to a digital beam former for receiving multiple dynamic links; and

a gateway terminal receiving the communication portions from the high altitude communication device and reassembling the communication portions into the communication.

⁹ 11. (Currently Amended) A system as recited in claim ¹ 9, wherein said user terminal comprises a TCP/IP protocol for transmitting the multiple communication portions.

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¹⁹ 12. (Cancel)

¹⁹ 13. (Currently Amended) A user terminal as ~~recited in~~ claim 12, ~~further comprising:~~

for a communication system having a plurality of high altitude communication devices comprises:

a plurality of receiving elements;

a receiving digital beam forming network for forming a plurality of receive beams from the plurality of elements;

a receiving hub and router circuit coupled to the receiving digital beam forming network for assembling communication portions from the beams formed in the receiving beam forming network;

a receiving direction control circuit coupled to the hub and router circuit and the receiving digital beam forming network for

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estimating relative position vectors for high altitude communication devices and the user terminal, said receiving digital beam forming network directing the receive beams to the high altitude communication devices;

a plurality of transmitting elements coupled to a transmitting digital beam forming network;

a transmitting hub and router circuit coupled to the transmitting digital beam forming network for making a communication into a plurality of datagrams and routing the plurality of datagrams through multiple dynamic links formed by transmitting digital beam forming networks; and

a transmitting direction control circuit coupled to said hub and router circuit and to said transmitting digital beam forming network for forming relative position vectors of said user terminal and high altitude device, said transmitting digital beam forming network directing transmitting beams to the plurality of high altitude communication devices.

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14. (Original) A user terminal as recited in claim ¹⁹13,

wherein said transmitting direction control circuit comprises estimation algorithms for generating a user state vector and a platform state vector.

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15. (Original) A user terminal as recited in claim ²⁰14,

wherein said user state vector and said platform state vector are used to generate relative position vectors.

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~~16~~. (Original)

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A user terminal as recited in claim ~~13~~,

wherein said transmitting hub and router circuit comprises a routing table which is updated with motion vectors from said transmitting direction control circuit.

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~~17~~. (Original)

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A user terminal as recited in claim ~~13~~,

wherein said transmitting digital beam forming circuit comprises a demodulator.

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[~~18~~. (Cancel)

~~19~~. (Currently Amended) A method ~~as recited in claim 18~~,

further comprising the step of of operating a communications system comprising:

forming a plurality of multiple communication links directed to a plurality of high altitude communication devices;

dividing a communication into a plurality of datagrams;

routing the plurality of datagrams through the plurality of multiple communication links;

directing the datagrams from the plurality of high altitude communication devices to a gateway station;

reassembling the datagrams into the communication;

generating a second plurality of datagrams at a gateway station;

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establishing a second plurality of dynamic communication links between a communication station and a user terminal through the plurality of high altitude communication devices; and

reassembling the second plurality of datagrams into the communication at a user terminal.

²⁰ 20. (Cancel)

²⁵ ²⁴ 21. (Currently Amended) A method as recited in claim [[18]] ²⁴ 19 prior to the step of reassembling, further comprising classifying the datagrams according to protocol.

²⁶ ²⁴ 22. (Currently Amended) A method as recited in claim [[18]] ²⁴ 19 prior to the step of reassembling, starting a reassembly timer counting a time; when the time exceeds a predetermined time before all fragments of a datagram arrive, disregarding the datagram; and, generating a resend signal.

¹¹ ²³ 23. (New) A system as recited in claim 10, wherein said high altitude communication device comprises a stratospheric platform.

¹² ²⁴ 24. (New) A system as recited in claim 10, wherein said high altitude communication device is selected from the group consisting of a LEO satellite, a MEO satellite, or a GEO satellite.

¹³ ²⁵ 25. (New) A system as recited in claim 10, wherein said user terminal is mobile.

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~~26~~. (New) A system as recited in claim 10, wherein said multiple dynamic links are capable of having independently varying data rates.

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~~27~~. (New) A system as recited in claim 10, wherein said user terminal comprises a router for routing uplink communication portions through said links.

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~~28~~. (New) A system as recited in claim 10, wherein said router receives the communication portions and arranges the communication portions in a predetermined sequence.

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~~29~~. (New) A system as recited in claim 10, wherein said user terminal comprises a multiple beam antenna capable of simultaneously generating the multiple dynamic links.

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~~30~~. (New) A system as recited in claim 10, wherein said user terminal comprises a TCP/IP protocol for transmitting the multiple communication portions.

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